SEQUENCE LISTING

<110> James Karras
      Erich Koller

<120> ANTISENSE MODULATION OF TOLL-LIKE RECEPTOR 4 EXPRESSION

<130> ISPH-0618

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                                                 Met Glu Leu Asn
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ttc tac aaa atc ccc gac aac ctc ccc ttc tca acc aag aac ctg gac 344
Phe Tyr Lys Ile Pro Asp Asn Leu Pro Phe Ser Thr Lys Asn Leu Asp
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ctg agc ttt aat ccc ctg agg cat tta ggc agc tat agc ttc ttc agt       392
Leu Ser Phe Asn Pro Leu Arg His Leu Gly Ser Tyr Ser Phe Phe Ser
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ttc cca gaa ctg cag gtg ctg gat tta tcc agg tgt gaa atc cag aca       440
Phe Pro Glu Leu Gln Val Leu Asp Leu Ser Arg Cys Glu Ile Gln Thr
        40                      45                      50

att gaa gat ggg gca tat cag agc cta agc cac ctc tct acc tta ata       488
Ile Glu Asp Gly Ala Tyr Gln Ser Leu Ser His Leu Ser Thr Leu Ile
        55                      60                      65

ttg aca gga aac ccc atc cag agt tta gcc ctg gga gcc ttt tct gga       536
Leu Thr Gly Asn Pro Ile Gln Ser Leu Ala Leu Gly Ala Phe Ser Gly
        70                      75                      80

cta tca agt tta cag aag ctg gtg gct gtg gag aca aat cta gca tct       584
Leu Ser Ser Leu Gln Lys Leu Val Ala Val Glu Thr Asn Leu Ala Ser
    85                      90                      95                 100

cta gag aac ttc ccc att gga cat ctc aaa act ttg aaa gaa ctt aat       632
Leu Glu Asn Phe Pro Ile Gly His Leu Lys Thr Leu Lys Glu Leu Asn
                105                     110                     115

gtg gct cac aat ctt atc caa tct ttc aaa tta cct gag tat ttt tct       680
Val Ala His Asn Leu Ile Gln Ser Phe Lys Leu Pro Glu Tyr Phe Ser
                120                     125                     130

aat ctg acc aat cta gag cac ttg gac ctt tcc agc aac aag att caa       728
Asn Leu Thr Asn Leu Glu His Leu Asp Leu Ser Ser Asn Lys Ile Gln
                135                     140                     145

agt att tat tgc aca gac ttg cgg gtt cta cat caa atg ccc cta ctc       776
Ser Ile Tyr Cys Thr Asp Leu Arg Val Leu His Gln Met Pro Leu Leu
    150                     155                     160

aat ctc tct tta gac ctg tcc ctg aac cct atg aac ttt atc caa cca       824
Asn Leu Ser Leu Asp Leu Ser Leu Asn Pro Met Asn Phe Ile Gln Pro
165                     170                     175                     180

ggt gca ttt aaa gaa att agg ctt cat aag ctg act tta aga aat aat       872
Gly Ala Phe Lys Glu Ile Arg Leu His Lys Leu Thr Leu Arg Asn Asn
                185                     190                     195

ttt gat agt tta aat gta atg aaa act tgt att caa ggt ctg gct ggt       920
Phe Asp Ser Leu Asn Val Met Lys Thr Cys Ile Gln Gly Leu Ala Gly
                200                     205                     210

tta gaa gtc cat cgt ttg gtt ctg gga gaa ttt aga aat gaa gga aac       968
Leu Glu Val His Arg Leu Val Leu Gly Glu Phe Arg Asn Glu Gly Asn
                215                     220                     225

ttg gaa aag ttt gac aaa tct gct cta gag ggc ctg tgc aat ttg acc       1016
Leu Glu Lys Phe Asp Lys Ser Ala Leu Glu Gly Leu Cys Asn Leu Thr
                230                     235                     240

att gaa gaa ttc cga tta gca tac tta gac tac tac ctc gat gat att       1064
Ile Glu Glu Phe Arg Leu Ala Tyr Leu Asp Tyr Tyr Leu Asp Asp Ile
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att gac tta ttt aat tgt ttg aca aat gtt tct tca ttt tcc ctg gtg    1112
Ile Asp Leu Phe Asn Cys Leu Thr Asn Val Ser Ser Phe Ser Leu Val
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agt gtg act att gaa agg gta aaa gac ttt tct tat aat ttc gga tgg    1160
Ser Val Thr Ile Glu Arg Val Lys Asp Phe Ser Tyr Asn Phe Gly Trp
            280                    285                    290

caa cat tta gaa tta gtt aac tgt aaa ttt gga cag ttt ccc aca ttg    1208
Gln His Leu Glu Leu Val Asn Cys Lys Phe Gly Gln Phe Pro Thr Leu
            295                    300                    305

aaa ctc aaa tct ctc aaa agg ctt act ttc act tcc aac aaa ggt ggg    1256
Lys Leu Lys Ser Leu Lys Arg Leu Thr Phe Thr Ser Asn Lys Gly Gly
        310                    315                    320

aat gct ttt tca gaa gtt gat cta cca agc ctt gag ttt cta gat ctc    1304
Asn Ala Phe Ser Glu Val Asp Leu Pro Ser Leu Glu Phe Leu Asp Leu
325                    330                    335                    340

agt aga aat ggc ttg agt ttc aaa ggt tgc tgt tct caa agt gat ttt    1352
Ser Arg Asn Gly Leu Ser Phe Lys Gly Cys Cys Ser Gln Ser Asp Phe
                345                    350                    355

ggg aca acc agc cta aag tat tta gat ctg agc ttc aat ggt gtt att    1400
Gly Thr Thr Ser Leu Lys Tyr Leu Asp Leu Ser Phe Asn Gly Val Ile
            360                    365                    370

acc atg agt tca aac ttc ttg ggc tta gaa caa cta gaa cat ctg gat    1448
Thr Met Ser Ser Asn Phe Leu Gly Leu Glu Gln Leu Glu His Leu Asp
            375                    380                    385

ttc cag cat tcc aat ttg aaa caa atg agt gag ttt tca gta ttc cta    1496
Phe Gln His Ser Asn Leu Lys Gln Met Ser Glu Phe Ser Val Phe Leu
        390                    395                    400

tca ctc aga aac ctc att tac ctt gac att tct cat act cac acc aga    1544
Ser Leu Arg Asn Leu Ile Tyr Leu Asp Ile Ser His Thr His Thr Arg
405                    410                    415                    420

gtt gct ttc aat ggc atc ttc aat ggc ttg tcc agt ctc gaa gtc ttg    1592
Val Ala Phe Asn Gly Ile Phe Asn Gly Leu Ser Ser Leu Glu Val Leu
                425                    430                    435

aaa atg gct ggc aat tct ttc cag gaa aac ttc ctt cca gat atc ttc    1640
Lys Met Ala Gly Asn Ser Phe Gln Glu Asn Phe Leu Pro Asp Ile Phe
            440                    445                    450

aca gag ctg aga aac ttg acc ttc ctg gac ctc tct cag tgt caa ctg    1688
Thr Glu Leu Arg Asn Leu Thr Phe Leu Asp Leu Ser Gln Cys Gln Leu
            455                    460                    465

gag cag ttg tct cca aca gca ttt aac tca ctc tcc agt ctt cag gta    1736
Glu Gln Leu Ser Pro Thr Ala Phe Asn Ser Leu Ser Ser Leu Gln Val
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cta aat atg agc cac aac aac ttc ttt tca ttg gat acg ttt cct tat    1784
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Leu Asn Met Ser His Asn Asn Phe Phe Ser Leu Asp Thr Phe Pro Tyr
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aag tgt ctg aac tcc ctc cag gtt ctt gat tac agt ctc aat cac ata    1832
Lys Cys Leu Asn Ser Leu Gln Val Leu Asp Tyr Ser Leu Asn His Ile
            505             510             515

atg act tcc aaa aaa cag gaa cta cag cat ttt cca agt agt cta gct    1880
Met Thr Ser Lys Lys Gln Glu Leu Gln His Phe Pro Ser Ser Leu Ala
            520             525             530

ttc tta aat ctt act cag aat gac ttt gct tgt act tgt gaa cac cag    1928
Phe Leu Asn Leu Thr Gln Asn Asp Phe Ala Cys Thr Cys Glu His Gln
            535             540             545

agt ttc ctg caa tgg atc aag gac cag agg cag ctc ttg gtg gaa gtt    1976
Ser Phe Leu Gln Trp Ile Lys Asp Gln Arg Gln Leu Leu Val Glu Val
            550             555             560

gaa cga atg gaa tgt gca aca cct tca gat aag cag ggc atg cct gtg    2024
Glu Arg Met Glu Cys Ala Thr Pro Ser Asp Lys Gln Gly Met Pro Val
565             570             575             580

ctg agt ttg aat atc acc tgt cag atg aat aag acc atc att ggt gtg    2072
Leu Ser Leu Asn Ile Thr Cys Gln Met Asn Lys Thr Ile Ile Gly Val
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tcg gtc ctc agt gtg ctt gta gta tct gtt gta gca gtt ctg gtc tat    2120
Ser Val Leu Ser Val Leu Val Val Ser Val Val Ala Val Leu Val Tyr
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aag ttc tat ttt cac ctg atg ctt ctt gct ggc tgc ata aag tat ggt    2168
Lys Phe Tyr Phe His Leu Met Leu Leu Ala Gly Cys Ile Lys Tyr Gly
            615             620             625

aga ggt gaa aac atc tat gat gcc ttt gtt atc tac tca agc cag gat    2216
Arg Gly Glu Asn Ile Tyr Asp Ala Phe Val Ile Tyr Ser Ser Gln Asp
630             635             640

gag gac tgg gta agg aat gag cta gta aag aat tta gaa gaa ggg gtg    2264
Glu Asp Trp Val Arg Asn Glu Leu Val Lys Asn Leu Glu Glu Gly Val
645             650             655             660

cct cca ttt cag ctc tgc ctt cac tac aga gac ttt att ccc ggt gtg    2312
Pro Pro Phe Gln Leu Cys Leu His Tyr Arg Asp Phe Ile Pro Gly Val
            665             670             675

gcc att gct gcc aac atc atc cat gaa ggt ttc cat aaa agc cga aag    2360
Ala Ile Ala Ala Asn Ile Ile His Glu Gly Phe His Lys Ser Arg Lys
            680             685`            690

gtg att gtt gtg gtg tcc cag cac ttc atc cag agc cgc tgg tgt atc    2408
Val Ile Val Val Val Ser Gln His Phe Ile Gln Ser Arg Trp Cys Ile
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ttt gaa tat gag att gct cag acc tgg cag ttt ctg agc agt cgt gct    2456
Phe Glu Tyr Glu Ile Ala Gln Thr Trp Gln Phe Leu Ser Ser Arg Ala
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ggt atc atc ttc att gtc ctg cag aag gtg gag aag acc ctg ctc agg    2504
Gly Ile Ile Phe Ile Val Leu Gln Lys Val Glu Lys Thr Leu Leu Arg
725             730             735             740

cag cag gtg gag ctg tac cgc ctt ctc agc agg aac act tac ctg gag    2552
Gln Gln Val Glu Leu Tyr Arg Leu Leu Ser Arg Asn Thr Tyr Leu Glu
            745             750             755

tgg gag gac agt gtc ctg ggg cgg cac atc ttc tgg aga cga ctc aga    2600
Trp Glu Asp Ser Val Leu Gly Arg His Ile Phe Trp Arg Arg Leu Arg
            760             765             770

aaa gcc ctg ctg gat ggt aaa tca tgg aat cca gaa gga aca gtg ggt    2648
Lys Ala Leu Leu Asp Gly Lys Ser Trp Asn Pro Glu Gly Thr Val Gly
            775             780             785

aca gga tgc aat tgg cag gaa gca aca tct atc tga agaggaaaaa         2694
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            790             795

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